

Table 1: Primers for SNP genotyping of CD81 SNPs with FP-TDI method

gene/rs	allele	PCR primer name	PCR Primer 1, 2	SNP primer name	SNP Primer 3, 4
rs800146	R	O1657	GAGCGGATTGTGTAACCTCTG		
	A/G	O1658	AGGAAGATCTACCCCTCACTTG	O1690	TGACTGTGGACATCGGAACTC
rs2521240	R	O1661	CAGTGTCTCTACCTGGCTTGTG	O1693	TGGCTTGTGGTTGAGGGG
	A/G	O1662	CATTCCAGTGTAGCACTCCT		
rs800158	R	O1665	TGTGTAACGTGTATTGGAAAA		
	A/G	O1666	CTGAGTGTCTGTTCCTCACTTA	O1698	AGCCAGTGTCCAAATCGTCC
rs800163	Y	O1669	GATGAAGGGATATCCAGAGAG	O1701	TGGGCTGAATAAGGAAGATCTGTC
	C/T	O1670	ACCAGGAGTCTGTATGCTAAG		
rs800136	Y	O1244	CTGATCATAGGGGAAGAACTATC	O1276	TCCCTTCTATTTCTAGTGAGTTCACTG
	C/T	O1245	AAAAGCAACCAAGGTAATAAAT		
rs800137	Y	O1246	AGAAAGGTCTCTGTCAAAACAT	O1278	CCAAAAATGCTGGGAGATGGCA
	C/T	O1247	TCTTCTCTCCCTGTGTGTA		
rs1164688	S	O1252	ATTGTGTAATCGTGTATTCAGTG		
	C/G	O1253	AGTTATGTGTCCTCAAGGTTAAG	O1285	GTACAGTAAATCAGGACAACCTTGAAGAG
rs2651842	R	O1256	GAGGTTGACAATGGATATCTG		
	A/G	O1257	AGACAGCAAGAGTGTGAGTGT	O1288	TGTGTGAAGGTGGGAGTGTG
rs800334	K	O1264	CTAAACCAAGAGTGTGAAATTA		
	G/T	O1265	AGACCTGTCTCAAAATATAAAT	O1296	ACCTTCTCCACACACACCGA
rs2522012	K	O1268	TGGCTAGAGTTGATTGTGTG	O1299	CGCTGGCCGGCTTCT
	G/T	O1269	GAGAGGGTAGGATTGTGTTAC		
rs2522013	M	O1270	TGGCTAGAGTTGATTGTGTG		
	A/C	O1271	GAGAGGGTAGGATTGTGTTAC	O1301	CTGGGGGAAGGGGGCGC
rs800335	Y	O1272	TGGCTAGAGTTGATTGTGTG		
	C/T	O1273	GAGAGGGTAGGATTGTGTTAC	O1303	GGGACTTGGAGGAAGGAC
rs800343	R	O1679	CTGGTTGTGGATGTGTTAA		
	A/G	O1680	GAAGAATGTTCTTGACTTGAGTG	O1712	GGGTTTAATCACAGGCATTAGTGCTG
rs800344	R	O1681	CTGGTTGTGGATGTGTTAA		
	A/G	O1682	GAAGAATGTTCTTGACTTGAGTG	O1714	TGGAAAGGTGGCGGGAATTACT
rs753136	Y	O1685	CAAAGTGACGTGGAAGAAC	O1717	CCCAGCCCTACAGGTGCAC
	C/T	O1686	TTCACCTCCCTCACAGAAGAC		

Fig. 1

rs800136

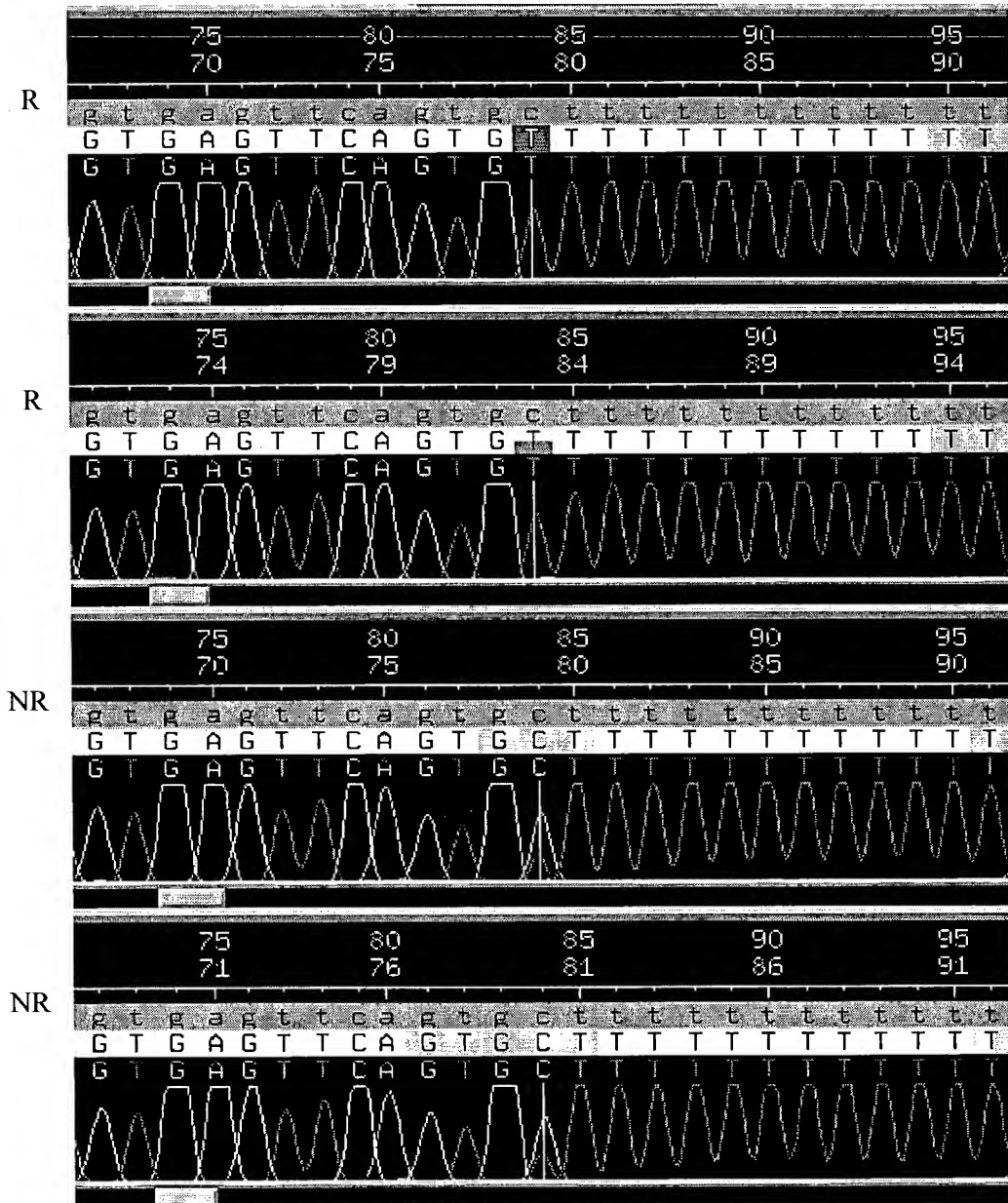


Fig. 2

rs800137

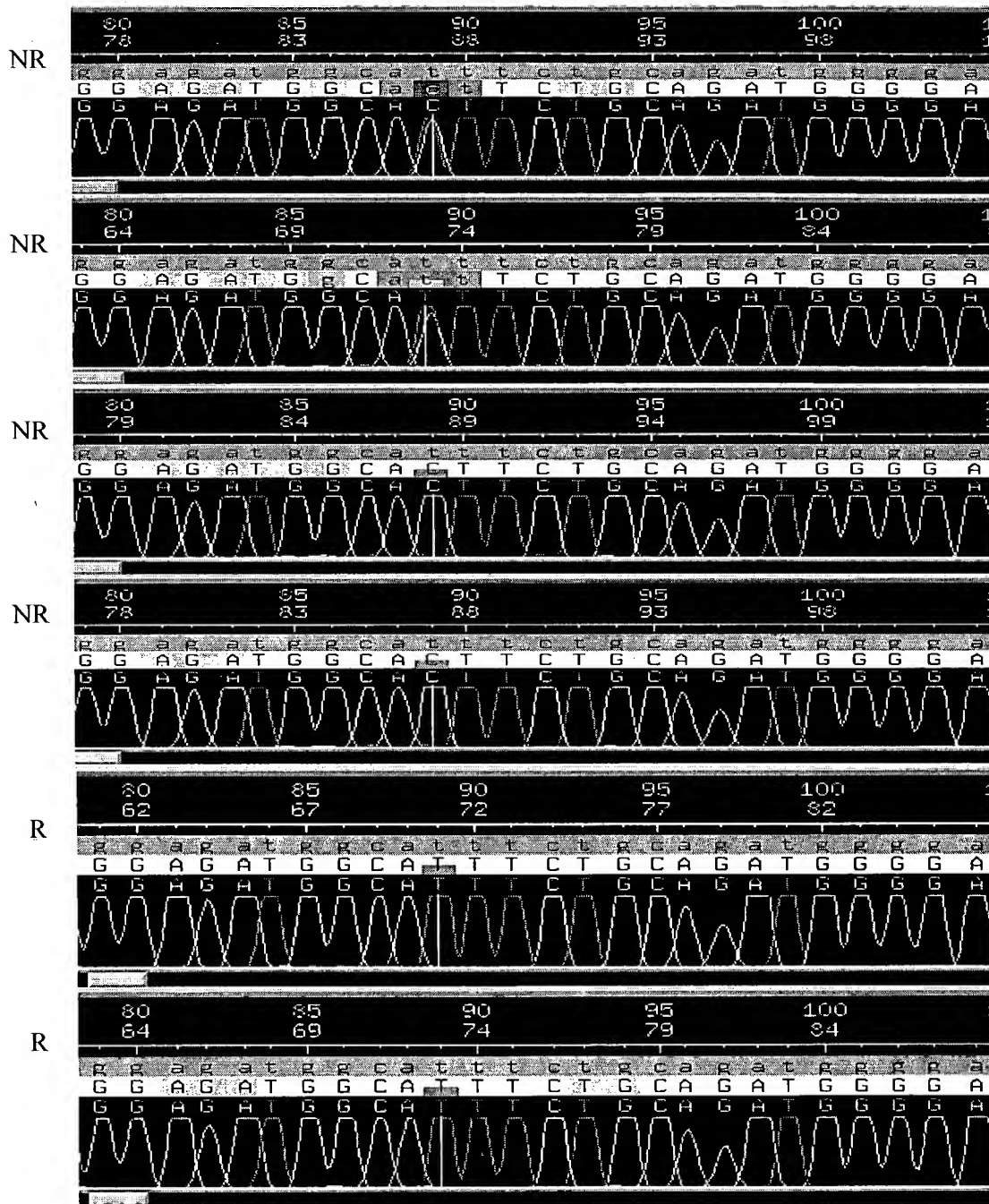


Fig. 3

rs800334

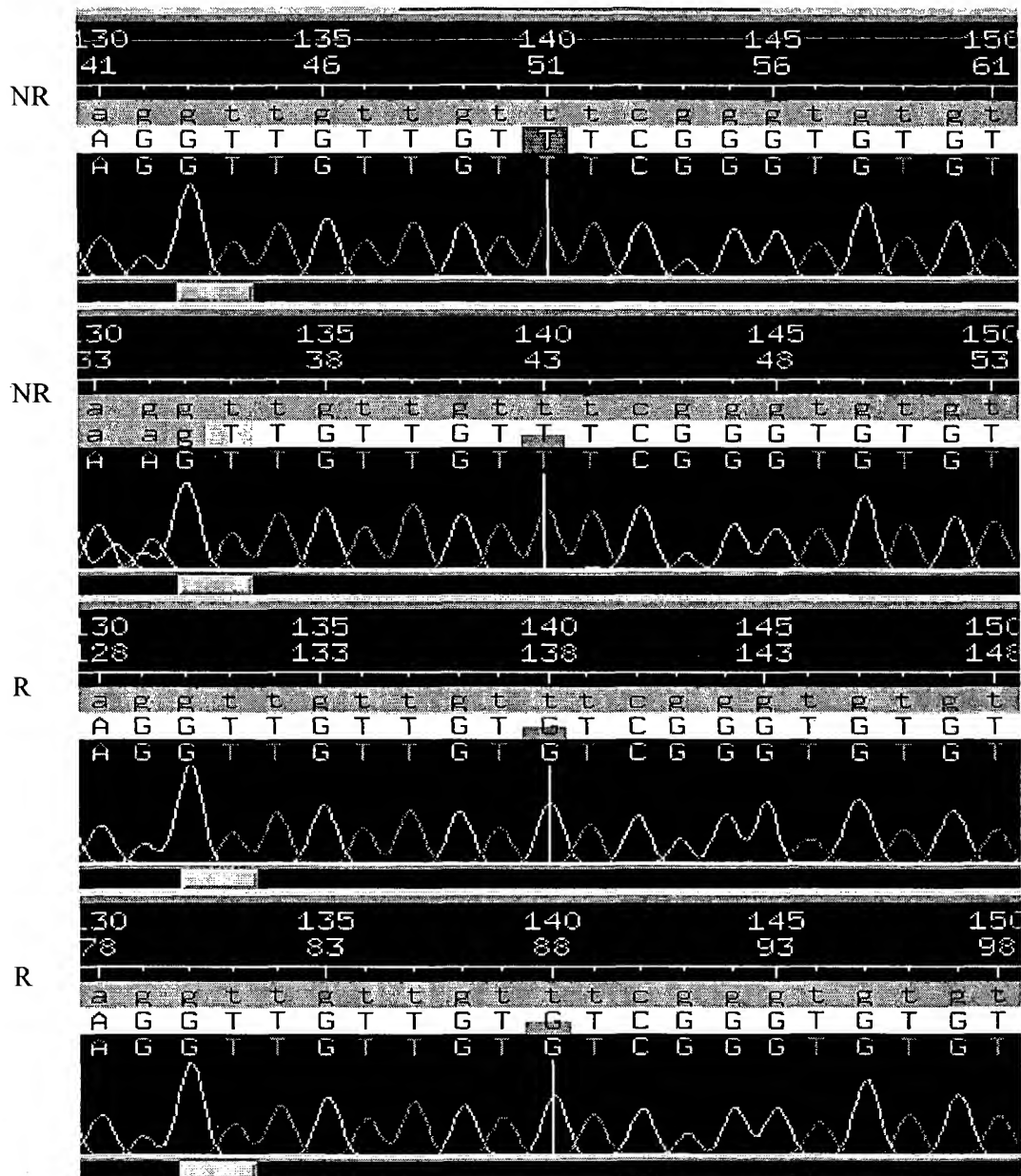


Fig. 4

Chromosome position 1989603

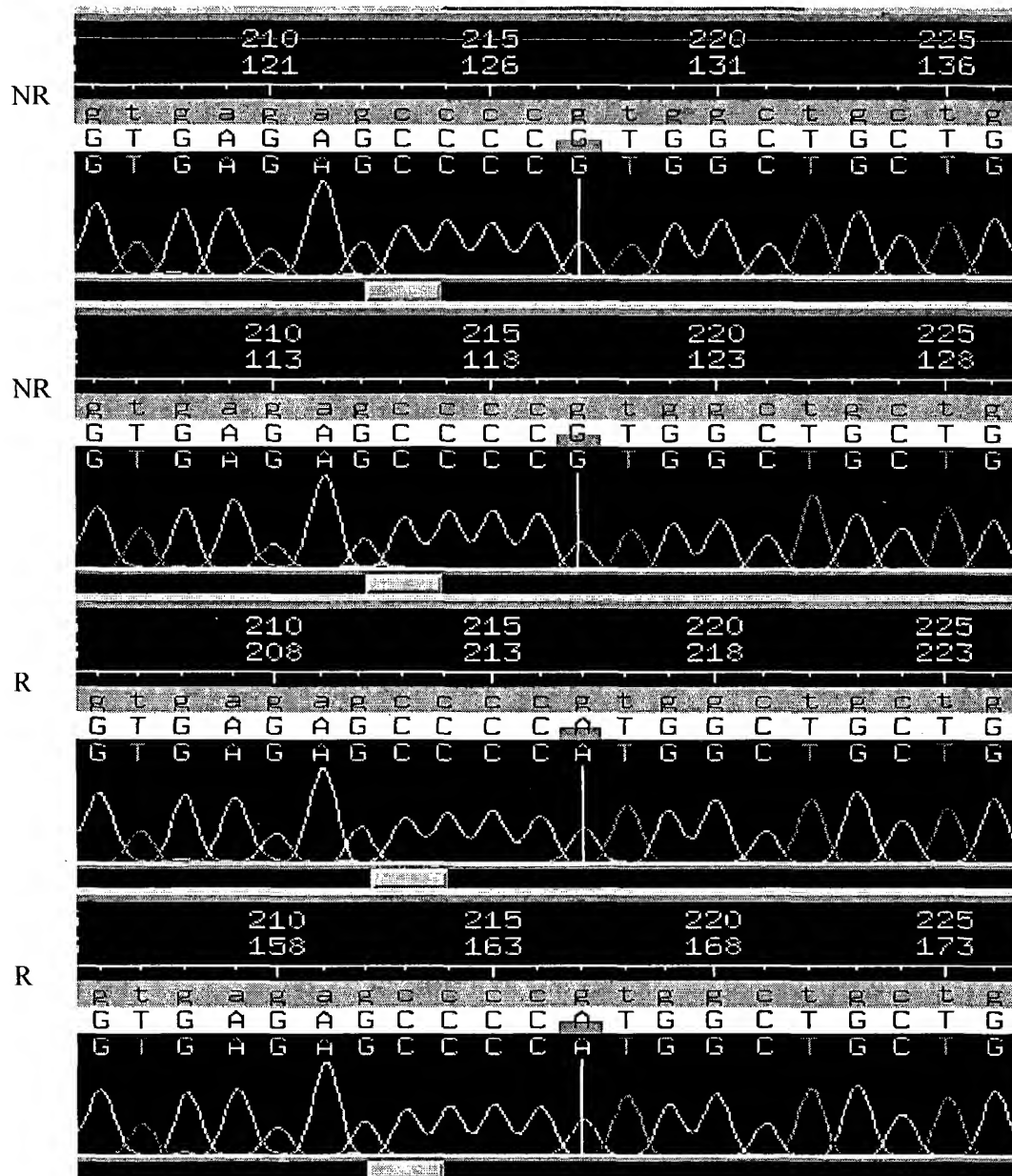


Fig. 5

rs2522012, rs2522013

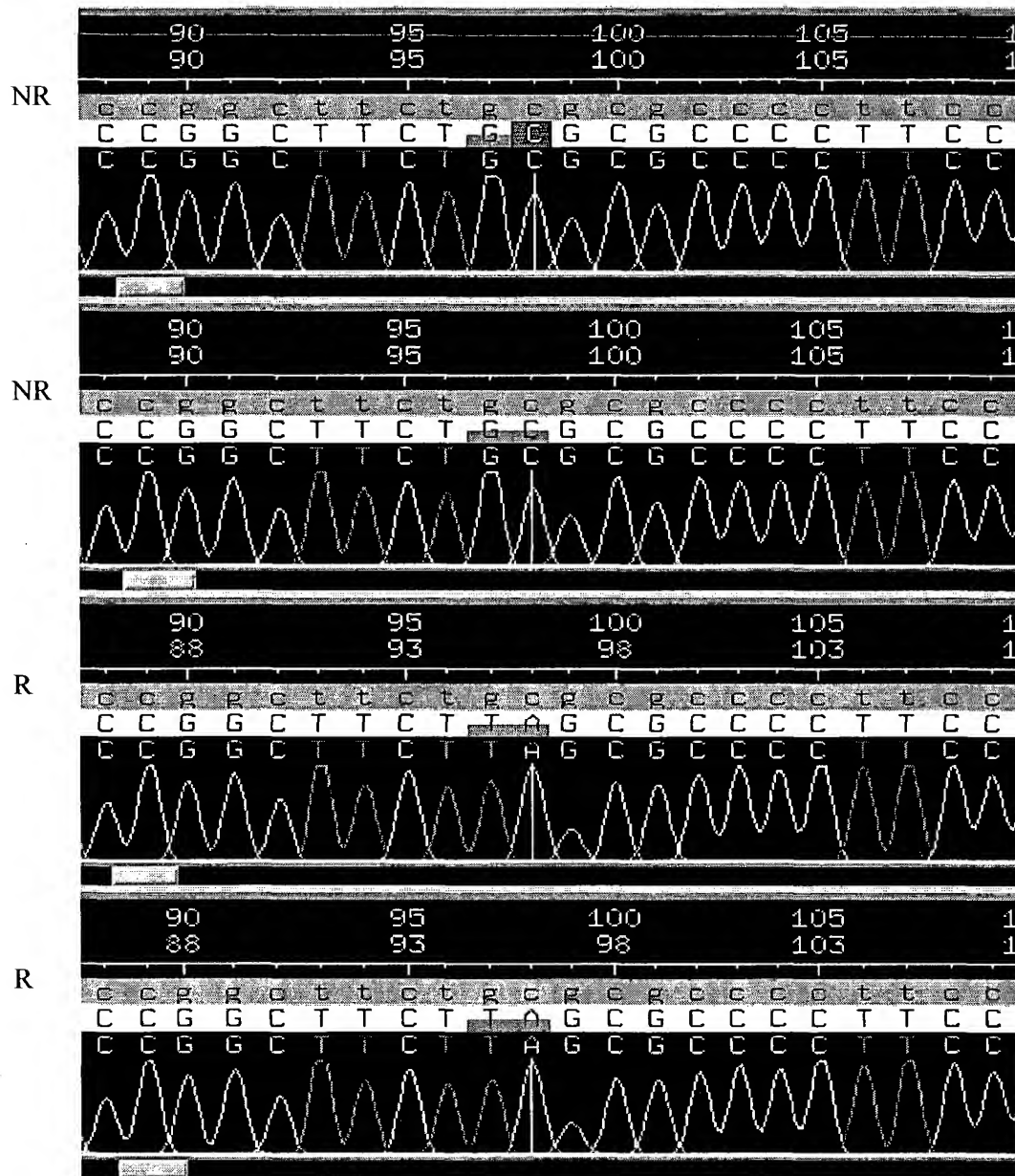


Fig. 6

rs800335

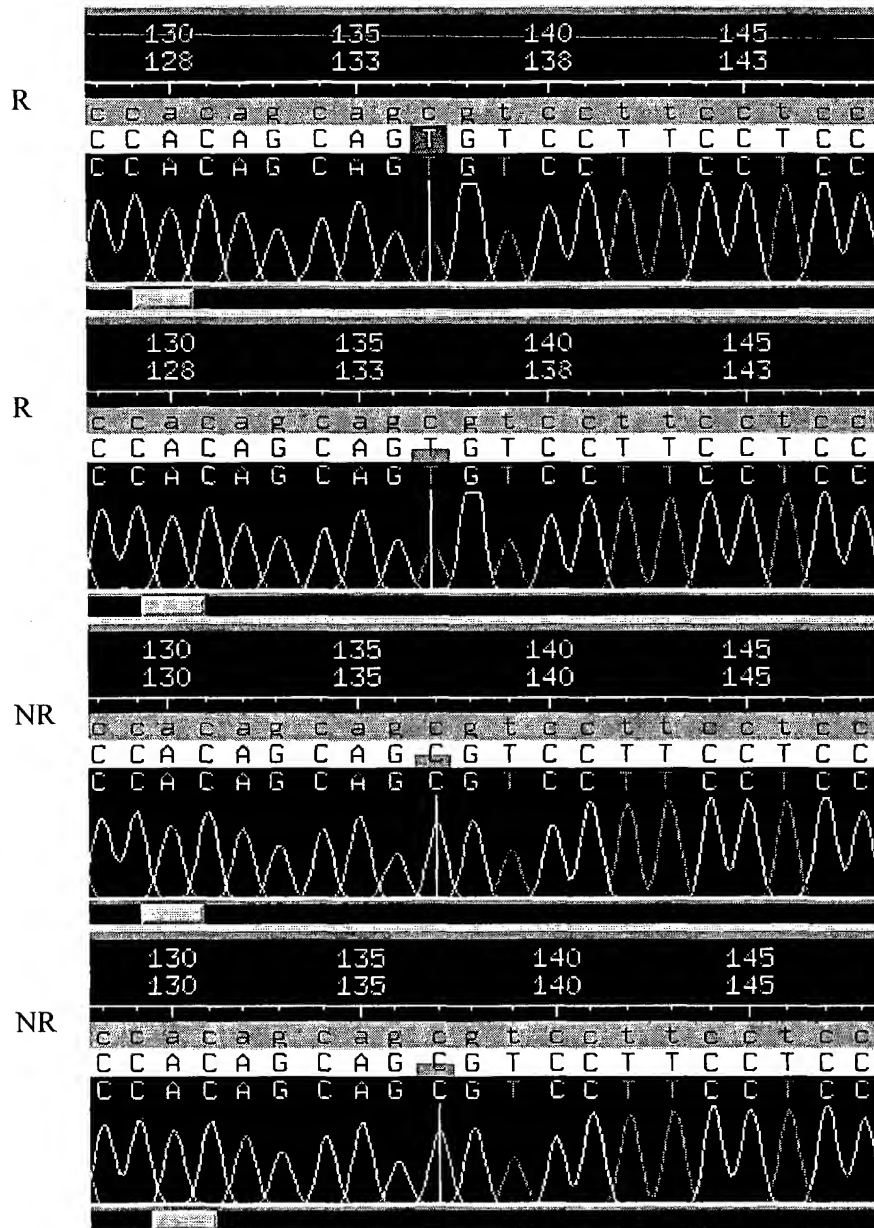


Fig. 7

Table 2: Distribution of CD81 SNPs in Chinese HCV infected patients

SNP	Location in CD81 genome	rs #	Nucleotide substitution	Allelic frequency	Genotype frequency
1	1949368	rs800146	G/A	G=64.3%, A=35.7%	GG=40.7%, GA=47.3%, AA=12.0%
2	1953512	rs2521240	G/A	G=74.0%, A=26.0%	GG=55.4%, GA=37.0%, AA=7.6%
3	1958563	rs800158	G/A	G=38.0%, A=62.0%	GG=15.2%, GA=45.7%, AA=39.1%
4	1963385	rs800163	C/T	C=39.1%, T=60.9%	CC=16.3%, CT=45.7%, TT=38.0%
5	1975622	rs800136	C/T	C=54.3%, T=45.7%	CC=29.3%, CT=50.0%, TT=20.7%
6	1976158	rs800137	C/T	C=54.3%, T=45.7%	CC=29.3%, CT=50.0%, TT=20.7%
7	1978278	rs1164688	G/C	G=65.8%, C=34.2%	GG=43.5%, GC=44.5%, CC=12.0%
8	1982077	rs2651842	G/A	G=47.8%, A=52.2%	GG=22.8%, GA=50%, AA=27.2%
9	1989526	rs800334	G/T	G=47.7%, T=52.3%	GG=23.3%, GT=48.8%, TT=27.9%
10	1989603		G/A	G=54.1%, A=45.9%	GG=29.1%, GA=50.0%, AA=20.9%
11	1991149		G/A	G=98.9%, A=1.1%	GG=98.9%, GA=0.0%, AA=1.1%
12	1991241		C/T	C=0.5%, T=99.5%	CC=0%, CT=1.1%, TT=98.9%
13	1991254	rs2522012	G/T	G=54.9%, A=45.1%	GG=30.4%, GA=48.9%, AA=20.7%
14	1991255	rs2522013	C/A	C=54.9%, A=45.1%	CC=30.4%, CA=48.9%, AA=20.7%
15	1991294	rs80035	C/T	C=54.9%, T=45.1%	CC=30.4%, CT=48.9%, TT=20.7%
16	191310		I/N	I=2.2%, N=97.8%	II=1.1%, IN=2.2%, NN=96.7%
17	2009970	rs800343	G/A	G=60.4%, A=39.6%	GG=60.4%, GA=0.0%, AA=39.6%
18	2010006	rs800344	G/A	G=58.8%, A=41.2%	GG=36.3%, GA=45.0%, AA=18.7%
19	2020475	rs753136	C/T	C=67.9%, T=32.1%	CC=44.6%, CT=46.7%, TT=8.7%

Fig. 8

Table 3: Association of CD81 SNPs with treatment response of HCV patients to interferon- α and ribavirin combined therapy

SNP	Location in CD81 genome	rs #	Nucleotide substitution	Genotype P-value	Allelic P-value	Genotype Odds ratio	Allelic Odds ratio
1	1949368	rs800146	G/A	0.3852			1.32(0.72-2.45)
2	1953512	rs2521240	G/A	0.9473			1.14(0.59-2.22)
3	1958563	rs800158	G/A	0.6607			0.76(0.42-1.40)
4	1963385	rs800163	C/T	0.521			1.29(0.71-2.36)
5	1973622	rs800136	C/T	0.1079	0.0435	0.52(0.21-1.31)	0.54(0.30-0.98)
6	1976158	rs800137	C/T	0.1079	0.0435	0.52(0.21-1.31)	0.54(0.30-0.98)
7	1978278	rs1164688	G/C	0.3676			1.23(0.66-1.27)
8	1982077	rs2651842	G/A	0.1290			0.55(0.31-1.00)
9	1989526	rs800334	G/T	0.0454	0.0119	3.29(1.07-10.12)	2.2(1.19-4.07)
10	1989603	pos1989603	G/A	0.0341	0.0101	3.61(1.08-12.09)	2.25(1.21-4.18)
11	1991149	pos1991149	G/A	1.0			
12	1991241	pos1991241	C/T	0.4615			
13	1991254	rs2522012	G/T	0.0331	0.0131	0.24(0.07-0.79)	0.47(0.26-0.86)
14	1991255	rs2522013	C/A	0.0331	0.0131	4.19(1.27-13.86)	2.12(1.17-3.85)
15	1991294	rs800335	C/T	0.0331	0.0131	0.24(0.07-0.79)	0.47(0.26-0.86)
16	191310	pos191310	I/N	0.2103			0.85(0.12-6.20)
17	2009970	rs800343	G/A	0.8013			0.87(0.48-1.56)
18	2010006	rs800344	G/A	0.9983			1.00(0.55-1.81)
19	2020475	rs753136	C/T	0.2933			1.620

Fig. 9

Table 4: CD81-SNPrs800136 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs800136 C allele	46	56
CD81-SNPrs800136 T allele	52	32

$\chi^2 = 4.0764$, P value = 0.0435, OR = 0.54, 95% CI = (0.30, 0.98)

Fig. 10

Table 5: CD81-SNPrs800137 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs800137 C allele	46	56
CD81-SNPrs800137 T allele	52	32

$\chi^2 = 4.0764$, P value = 0.0435, OR = 0.54, 95% CI = (0.30, 0.98)

Fig. 11

Table 6: CD81-SNPrs800334 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs800334 G allele	52	29
CD81-SNPrs800334 T allele	40	49

$\chi^2 = 6.3310$, P value = 0.0119, OR = 2.2, 95% CI = (1.19, 4.07)

Table 7: CD81-SNPrs800334 genotypes and associated treatment response status

	responder	Non-responder
CD81-SNPrs800334 GG genotype	15	31
CD81-SNPrs800334 GT+TT genotype	5	34

$\chi^2 = 3.29$, P value = 0.0321, OR = 3.29, 95% CI = (1.07, 10.12)

Fig. 12

Table 8: CD81-SNPpos1989603 alleles and associated treatment response status

	responder	Non-responder
CD81-SNP pos1989603 A allele	52	27
CD81-SNP pos1989603 G allele	42	49

$\chi^2 = 6.6182$, P value = 0.0101, OR = 2.25, 95% CI = (1.21, 4.18)

Table 9: CD81-SNPpos1989603 genotypes and associated treatment response status

	responder	Non-responder
CD81-SNP pos1989603 AA genotype	14	31
CD81-SNP pos1989603 AG+GG genotype	4	34

$\chi^2 = 5.1402$, P value = 0.0234, OR = 3.61, 95% CI = (1.08, 12.09)

Fig. 13

Table 10: CD81-SNPrs2522012 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs2522012 G allele	45	54
CD81-SNPrs2522012 T allele	53	30

$\chi^2 = 6.1512$, P value = 0.0131, OR = 0.47, 95% CI = (0.26, 0.86)

Table 11: CD81-SNPrs2522012 genotypes and associated treatment response status

	Responder	Non-responder
CD81-SNPrs800334 GG+GT genotype	34	38
CD81-SNPrs800334 TT genotype	15	4

$\chi^2 = 6.0882$, P value = 0.0136, OR = 0.24, 95% CI = (0.07, 0.79)

Fig. 14

Table 12: CD81-SNPrs2522013 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs2522012 A allele	53	30
CD81-SNPrs2522012 C allele	45	54

$\chi^2 = 6.1512$, P value = 0.0131, OR = 2.12, 95% CI = (1.17, 3.85)

Table 13: CD81-SNPrs2522013 genotypes and associated treatment response status

	Responder	Non-responder
CD81-SNPrs800334 AA genotype	15	4
CD81-SNPrs800334 AC+CC genotype	34	38

$\chi^2 = 6.0882$, P value = 0.0136, OR = 0.24, 95% CI = (0.07, 0.79)

Fig. 15

Table 14: CD81-SNPrs800335 alleles and associated treatment response status

	responder	Non-responder
CD81-SNPrs2522012 C allele	45	53
CD81-SNPrs2522012 T allele	53	30

$\chi^2 = 6.1512$, P value = 0.0131, OR = 0.47, 95% CI = (0.26, 0.86)

Table 15: CD81-SNPrs800335 genotypes and associated treatment response status

	Responder	Non-responder
CD81-SNPrs800334 CC+CT genotype	34	38
CD81-SNPrs800334 TT genotype	15	4

$\chi^2 = 6.0882$, P value = 0.0136, OR = 0.24, 95% CI = (0.07, 0.79)

Fig. 16

Haplotype Block Information

CD81

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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HAP Map:16 SNPs in 9 HAP Blocks

rs800146	rs2521240	rs800158	rs800163	rs800136	rs800137	rs1164688	rs2651842	rs800334	pos1989 603	rs2522012	rs2522013	rs800335	rs800343	rs800344	rs753136
0.001	4.144	5.051	4.822	12.237	0.536	2.12	3.799	7.449	0.077	0.013	0.001	0.039	18.66	0.036	10.469

(Kb)

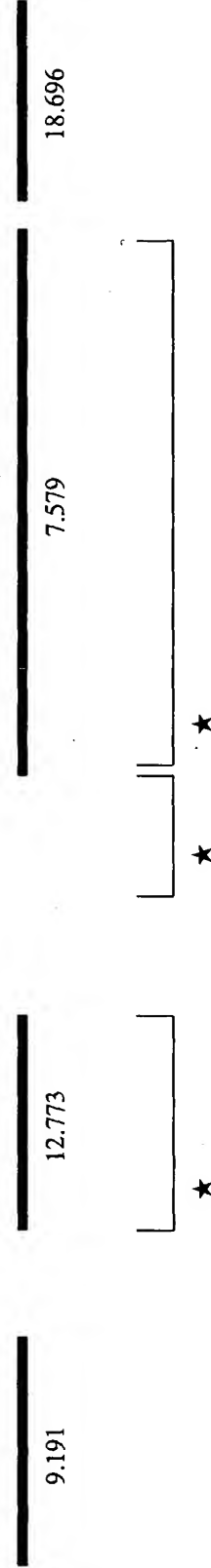


Fig. 17

Table 16: CD81-SNPrs800136 and rs800137 haplotype and associated treatment response status

	Responder	Non-responder
CC haplotype	46	52

$\chi^2=4.0746$, P value = 0.0435, OR = 1.8370

Fig. 18

Table 17: CD81-SNPrs800334, pos1989603, rs2522012, rs2522013, rs800335 haplotypes and associated treatment response status

	Responder	Non-responder
TGGCC haplotype	51	43
GATAT haplotype	30	52

$\chi^2=5.1343$, P value = 0.0235, OR = 1.9767 for TGGCC haplotype
 $\chi^2=5.4980$, P value = 0.0190, OR = 0.4915 for GATAT haplotype

Fig. 19